

Univerzita Karlova
Abstract of the diploma thesis
Analysis in Banach spaces
Matěj Novotný, Praha 2013

In the thesis, connection between two certain types of equivalence on Banach spaces is studied: Between Lipschitz and linear one. In general, linear equivalence of two Banach spaces implies their Lipschitz equivalence, but the converse need not be true, which is shown by some nonseparable examples. There are summarized several examples to this question in the thesis, both positive and negative ones. Moreover, it is shown that James' quasi-reflexive space and its dual space have unique Lipschitz structure. To prove this, theory of linearization of Lipschitz mappings and at the same time linear structure of the two mentioned spaces is used.